REMARKS

In the Office Action, the Examiner indicated that Claims 1-13 and 18-22 are pending in the application, Claim 2 having been withdrawn. Applicants believe this to be incorrect, as only Claims 1, 3-13 and 18-22 are pending as Claim 2 has been cancelled. The Examiner rejected Claims 1, 3-13 and 18-22.

Rejection of Claims 1-13, 18-22 under 35 U.S.C. §103(a)

On page 2 of the Office Action, the Examiner rejected Claims 1,3-6, 8-13 and 18-22 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,799,069 to Weston et al. in view of U.S. Patent No. 4,008,427 to Johnson and further in view of U.S. Patent No. 6,624,635 to Lui.

On page 5 of the Office Action, the Examiner rejected Claim 7 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,799,069 to Weston et al. in view of U.S. Patent No. 4,008,427 to Johnson in view of U.S. Patent No. 6,624,635 to Lui and further in view of U.S. Patent No. 5,995,381 to Wakamatsu.

The Present Invention

The present invention is an improved telephone line power supply that creates high yield, low voltage power using power drawn from a telephone line for powering a peripheral device, such as a modem integrated into a notebook PC, and further supplementing the low power voltage with power from a host device, such as the notebook PC, if the power drawn from the phone line is insufficient to power the peripheral device. Claim 1 (and each additional independent claim)

specifically recites "a pulse circuit coupled to said oscillator and coupled between the output of said gyrator and the input of said inductor; a converter coupled between the output of said inductor and the electrical device, said converter producing line power at an output." These components are used in such a fashion that line power from a phone line is regulated to provide a constant output voltage, e.g., for powering a peripheral device. Once regulated, the line power from the phone line is supplemented with power from the host device at a combiner to maintain a constant power level for powering the peripheral device. Claim 1 further recites "a combiner having a input coupled to a host power supply and an output coupled to the output of said converter, said combiner supplementing said line power with host power from said host device when the voltage level of said line power falls below a predetermined level." The present invention finds particular utility in supplying power to electrical devices such as telephone modems attached to host devices such as laptop PCs and PDAs.

U.S. Patent No. 5,799,069 to Weston et al.

U.S. Patent No. 5,799,069 to Weston et al. ("Weston") teaches a method and apparatus for detecting the amount of power available from a phone line and for adjusting the clock rate and data transfer rate of a modem, or of another device used to transfer data over a phone line. The apparatus measures the voltage level of the phone line. After obtaining the voltage, the apparatus determines the amount of power available from the phone line. After determining these two attributes of the phone line, a clock rate is selected for the transfer device; a call is placed from the device to the destination; a data transfer rate is selected based on the available voltage and power; and the data is transferred. The apparatus of Weston includes a power supply converter

but lacks a gyrator, an inductor, an oscillator and a pulse circuit as acknowledged by the Examiner.

U.S. Patent No. 4,008,427 to Johnson

U.S. Patent No. 4,008,427 to Johnson ("Johnson") teaches an electronic power supply using pulse width modulation voltage regulation to provide a regulated output range for a wide range of input voltages. Johnson utilizes a plurality of filters, each of which has one of a plurality of power inverters connected to its output. The apparatus further employs a control switch to change the level of voltage regulation and the turns ratio of the primary winding of the power supply output transformer, thereby obtaining increased tolerance to input voltage changes. The result is a power supply that can be used with a wide variety of voltage sources. The Examiner relies on Johnson to teach a pulse circuit.

U.S. Patent No. 6,624,635 to Lui

U.S. Patent No. 6,624,635 to Lui ("Lui") teaches an uninterruptible power supply (UPS) for use with an Internet telephone or Internet telephone cable modem. The power supply has an AC/DC converter for producing converted DC power, and also a rechargeable battery. A DC output multiplexer selects one of the DC power sources (either the battery or the converted DC power) and furnishes the power to the load. The multiplexer has an input control signal for switching the DC source to battery, and an output indicator indicating when the battery is acting as the DC source. The load includes a controller which generates a testing function for measuring the reserve charge of the battery. Additionally, the controller measures the charge and discharge

intervals of the battery to create performance information about the battery. The Examiner relies on Lui to teach a combiner coupled to a host supply in order to supplement line power with power from the host device whenever the line power falls below a predetermined level.

U.S. Patent No. 5,995,381 to Wakamatsu

U.S. Patent No. 5,995,381 to Wakamatsu ("Wakamatsu") teaches a switching regulator capable of suppressing a voltage ripple without increasing the size of the inductor and the capacitor of a smoothing circuit. The regulator is also capable of being miniaturized with only a small switching loss, reduced noise, and high efficiency. The switching regulator utilizes pulse width modulation control signals from a pulse width control circuit inputted to a series of delay circuits. The delay circuits allow for transistor switches to be turned ON/OFF in a predetermined period, with only a slight pause period where both switches are turned OFF. The Examiner relies on Wakamatsu to teach utilizing an output shunt regulator with the pulse circuit.

The Examiner Has Not Established a *Prima Facie* Case of Obviousness

As set forth in the MPEP:

> To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to modify the reference or to combine reference teachings.
> MPEP 2143

As noted above, the present claimed invention provides for an improved telephone line power supply that creates high yield, low voltage power using power drawn from a telephone line,

isolating and regulating this power so to be used as a power supply for a peripheral device, such as a modem. Through this isolating and regulating power, a constant output power is provided to the modem from the phone line itself. This limitation, the isolation of and regulation of power from a phone line, achieved by utilizing the claimed elements, specifically a gyrator, inductor, oscillator, pulse circuit and converter, alone and in combination with the other elements of the recited claims, shows the present claimed invention to be novel and non-obvious over the prior art, specifically Weston, Johnson, Wakamatsu and Lui as cited by the Examiner, whether considered alone or in any combination. The cited prior art fails to address or solve the problem solved by the present invention, specifically utilizing a pulse circuit in combination with a power converter to provide a constant power level to a phone line powered device, and, when necessary, supplementing the phone line power with power from a host device.

In previous responses (such as the response mailed March 10, 2006), Applicants have addressed the combination of Westin in view of Johnson extensively, and for convenience, the arguments will not be repeated in this response. Instead, the arguments will focus on the addition of Lui as a teaching reference in rejecting Claims 1,3-6, 8-13 and 18-22.

The addition of Lui does not teach or suggest the claimed invention. Lui teaches the use of a UPS to supply power to an Internet telephone or modem. However, Lui provides no teaching of utilizing a combiner to supplement power drawn from a phone line to power the modem. Lui merely teaches a UPS that utilizes an AC/DC converter, a multiplexer for selecting inputs, and a battery. One of two DC power supplies is always powering the system, not a combination of the two. There is no teaching of combiner circuitry, as the Examiner asserts in claims 1, 18 and 21.

In contrast, Lui teaches a multiplexer operating as a switch, selecting one input or the other. Specifically, Lui (Column 4, lines 23-29) recites:

> The multiplexer **62** is controlled by BAT_TEST_L input **64**, and connects the battery **24** to the DC output **68** when BAT_TEST_L **64** is asserted. During the time BAT_TEST_L **64** is asserted, the DC output **68** is provided exclusively by the battery **24**, and when it is not asserted, the DC output **68** is provided by the AC/DC converter output **14**.

Here, it is clear that the multiplexer the Examiner is asserting acts as a combiner does not combine the two inputs, but rather acts as a switching mechanism, choosing one input or the other, but never producing an output that contains a combination of the two inputs as is specifically claimed in the present invention. Additionally, Lui provides no motivation for modifying a system utilizing a phone line powered modem where data transfer speeds are adjusted based upon the input voltage and power levels. As previously noted, Weston in view of Johnson does not teach the present claimed invention, and the addition of Lui provides no further teachings or motivation to modify the system of Weston in view of Johnson to achieve the present invention.

Without such teaching or suggestion, it is improper to reject the claims based upon Weston, Johnson, and Lui, either alone or in any combination. Claims 1,3-6, 8-13 and 18-22 patentably define over Weston in view of Johnson, and further in view of Lui, and the Examiner is respectfully requested to reconsider and withdraw the rejection of the claim based on these references.

The addition of Wakamatsu (103(a) rejection of Claim 7) does not teach or suggest the claimed invention. Wakamatsu is concerned with a switching regulator utilizing PWM control signals. Similar to Johnson though, Wakamatsu provides no motivation to modify a system utilizing a phone line powered modem where data transfer speeds are adjusted based upon the

input voltage and power levels, and neither teaches nor suggests the claimed structure. As noted above, Weston in view of Johnson in further view of Lui does not teach the present claimed invention, and the addition of Wakamatsu provides no further teachings or motivation to modify the system of Weston in view of Johnson in further view of Lui to achieve the present invention.

Without such teaching or suggestion, it is improper to reject the claims based upon Weston, Johnson, and Wakamatsu, either alone or in any combination. Claim 7 patentably defines over Weston in view of Johnson in further view of Lui, and further in view of Wakamatsu, and the Examiner is respectfully requested to reconsider and withdraw the rejection of the claim based on these references.

Conclusion

The present invention is not taught or suggested by the prior art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims. An early Notice of Allowance is earnestly solicited.

The Commissioner is hereby authorized to charge any fees associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted,

October 12, 2006
Date

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